



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/509,089

09/28/2004

Andrew P. Heron

36-1860

9936

23117 7590 10/28/2008
NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER

KANE, CORDELIA P

ART UNIT

PAPER NUMBER

2432

MAIL DATE

DELIVERY MODE

10/28/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/509,089	Applicant(s) HERON ET AL.	
	Examiner CORDELIA KANE	Art Unit 2432	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 11, 2008 has been entered.

Response to Arguments

2. Applicant's arguments filed August 11, 2008 have been fully considered but they are not persuasive. With regards to claim 1, applicant argues that Sit fails to teach or suggest maintaining a connection between the first controller and second controller. However, Sit teaches determining whether to maintain the connection and then maintaining that connection (column 6, lines 31-43, Figure 4).

3. With regard to claim 18, applicant also argues that Crichton fails to teach maintaining a connection. However, Crichton teaches that after the initiation that there is a continued exchange, which is equivalent to maintaining a connection (Figure 5).

4. Applicant goes on to argue that Crichton fails to teach or suggest initiating a connection to a first controller from a second controller since there is a middle proxy. However, Crichton teaches the client end proxy opens the connection (column 5, lines 49-51). Crichton goes on to teach that the middle proxy may be combined with either

Art Unit: 2432

end proxy (column 8, lines 64-65). Therefor the second controller initiates the connection directly with the first controller.

5. Applicant's arguments with respect to claims 19 – 32 have been considered but are moot in view of the new ground) of rejection.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 24 and 30 – 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Referring to claim 24, it is unclear how the first controller would be local to the monitor station when it is located on a separate network side.

8. Referring to claims 30 – 32, applicant refers to the second controller, however there is no second controller mentioned previously in the claim.

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

10. Claims 1 – 4, 12 – 17, 19 – 23, 25, 30, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Sit. Referring to claim 1, Sit teaches:

- a. A first controller connected to the network on the first network side for receiving control messages from a control station (column 3, lines 63-65).
 - b. A second controller connected to the network on the second network side, for receiving the device control messages from the first controller and controlling the operation of at least one device (column 4, lines 3-9).
 - c. Wherein the first controller is configured to send the device control messages to the second controller after initiation and maintenance of a connection to the first controller by the second controller (column 4, lines 28-31, column 6, lines 31-43, Figure 4).
11. Referring to claim 2, Sit teaches that the second controller initiates connection by sending a connection request to the first controller (column 3, lines 63-65).
 12. Referring to claim 3, Sit teaches that the access control means is configured to prevent connection requests from the first controller from reaching the second controller (column 2, lines 23-25).
 13. Referring to claim 4, Sit teaches that the connection is maintained between the first and second controllers following receipt of the connection request from the second controller, and to permit the first controller to send the device control messages to the second controller (column 4, lines 27-36).
 14. Referring to claim 12, Sit teaches that the control station is configured to receive information relating to an event occurring at the devices via the first (column 4, lines 48-60) and second controller (column 4, line 64-column 5, line 1).

Art Unit: 2432

15. Referring to claim 13, Sit teaches that the control station generates device control messages in response to received information (column 4, lines 39-42).

16. Referring to claim 14, Sit teaches that the control station initiates a connection to the first controller to enable it to receive information (column 3, lines 53-65).

17. Referring to claim 15, Sit teaches that the first controller initiates a connection to the control station (column 4, lines 48-60).

18. Referring to claim 16, Sit teaches that the first controller is triggered to initiate the connection to the control station after initiation of the connection to the first controller by the second controller (column 3, lines 44-47).

19. Referring to claim 17, Sit teaches that the second controller controls one or more devices (column 3, lines 51-53).

20. Referring to claim 19, Sit teaches:

d. A monitor station connected to the network on the first network side for receiving information concerning the devices (column 4, lines).

e. A first controller connected to the network on the second network side for receiving information and sending information to the monitor station (column 5, lines 1-3).

f. A second controller for monitoring operations of the device and sending information to the first controller (column 4, line 63-column 5, line 1).

g. Wherein the first controller is configured to send information to the monitor station after initiation and maintenance (column 6, lines 31-43) of a connection to the first controller by the monitor station (column 4, lines 29-31).

Art Unit: 2432

21. Referring to claim 20, Sit teaches that the system is configured to maintain a connection between the monitor station and the first controller and to permit the first controller to send information received to the monitor station without requesting a new connection (column 4, lines 27-36).

22. Referring to claim 21, Sit teaches generating device control messages in response to received information (column 4, lines 39-42).

23. Referring to claim 22, Sit teaches that the device control messages are sent to the device via the first and second controllers (column 4, lines 7-9).

24. Referring to claim 23, Sit teaches that the second controller is connected to the network on the second network side (Figure 2).

25. Referring to claim 25, Sit teaches that the communications path between the monitor station and the remote site comprises a wide area network (Figure 2).

26. Referring to claim 30, Sit teaches:

h. Initiating and maintaining a connection to the first controller from the monitor station (column 4, lines 29-31).

i. Sending event information relating to operation of the device from the second controller to the first controller and then to the monitor station (column 4, line 63-column 5, line 3).

27. Referring to claim 31, Sit teaches generating device control messages in response to received information (column 4, lines 39-42).

Art Unit: 2432

28. Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Crichton.

Referring to claim 18, Crichton teaches:

j. Initiating and maintaining a connection to a first controller from the second controller (column 5, lines 49-51, Figure 5).

k. Sending device control messages from the control station to the first controller and from the first controller to the second controller (column 5, lines 17-25).

Claim Rejections - 35 USC § 103

29. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sit.

30. Sit teaches all the limitations of the parent claims. Sit fails to disclose encrypting the device control messages. Examiner takes official notice that it is well known in the art to encrypt messages being sent across insecure channels. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sit to include encrypting the device control messages. The motivation for doing so would be to keep the messages secure over the insecure channel of the Internet.

31. Claims 6 – 9 are rejected under 35 USC 103 (a) as being obvious over Sit in view of Rudolf Wegener's US Publication 2003/0216891 A1.

32. Sit discloses all the limitations of the parent claim. Sit does not explicitly disclose the control station being remote to both the first and second controller. However, Wegener discloses having the control station remote from both a first and second station (Figure 3). Sit and Wegener are analogous art because they are from the same

Art Unit: 2432

field of endeavor, remotely controlling a device. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Sit and Wegener before him or her, to modify the system of Sit to include the remote control station of Wegener. The motivation for doing so would have been to reduce the amount of unacceptable delays (page 1, paragraph 3).

33. Referring to claim 7, Sit teaches a system wherein a communications path between the control station and the remote site comprises a wide area network (Figure 2, element 150).

34. Referring to claim 8, Sit teaches further access control means between the wide area network and the first controller (Page 2, lines 66-67).

35. Referring to claim 9, Sit teaches that the further access control means comprises a firewall (column 2, line 66).

36. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sit in view of Wegener, and further in view of Shaw.

37. Sit in view of Wegener discloses all the limitations of the parent claim. Sit in view of Wegener does not explicitly disclose providing inner and outer firewall to the first controller with a demilitarized zone. However, Shaw discloses the use of having a controller (see Figure 1, element 102, and paragraph 0029) in a "demilitarized zone" between a first firewall (see Figure 1, element 100) (see Figure 1, element 102) and a second firewall (see Figure 1, element 100) which separates it from the wide area network (see Figure 1, element 104).

Art Unit: 2432

38. Hence, it would have been obvious to one of ordinary skill in the art to have included the technology taught by Shaw into the invention taught by Sit in view of Wegener above, to prevent unauthorized access to the first controller from the wide area network. In doing so would help ensure that the client complies with the security requirements, before allowing the client access to the network inside the inner firewall. Hence, to do so, would add an additional layer of security to the system (see paragraph 0026 of the Shaw reference).

39. Claims 11, 24 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sit as applied to claim 1 above, and further in view of Crichton.

40. Sit does not explicitly disclose that the first and second controllers communicate over TCP/IP. However, Crichton discloses that TCP/IP is the method used for communication in networks (column 1, lines 20-22). Crichton and Sit are analogous art because they are from the same field of endeavor, network communication. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Sit and Crichton before him or her, to modify the network of Sit to include the TCP/IP of Crichton. The motivation for doing so would have been to comply with compatible communication standards (column 1, 23-25).

41. Referring to claim 24 Sit discloses all the limitations of the parent claim. Sit does not explicitly disclose the first controller being local to the monitor and the second controller being remote to the monitor station. However, Crichton teaches a client monitoring the server, and a client end proxy local to the client sending messages to the server, which controls the server (column 4, lines 30-37, Figure 9). Sit and Crichton are

Art Unit: 2432

analogous art because they are from the same field of endeavor, communicating across a firewall. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Sit and Crichton before him or her, to modify the system of Sit to include the proxies of Crichton. The suggestion/motivation for doing so would have been to establish a secure communication link across multiple firewalls (column 2, lines 52-55).

42. Claims 26 – 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sit, and further in view of Shaw.

43. Referring to claim 26, Sit discloses all the limitations of the parent claim. Sit does not explicitly disclose providing inner and outer firewall to the first controller with a demilitarized zone. However, Shaw discloses the use of having a controller (see Figure 1, element 102, and paragraph 0029) in a “demilitarized zone” between a first firewall (see Figure 1, element 100) (see Figure 1, element 102) and a second firewall (see Figure 1, element 100) which separates it from the network (see Figure 1, element 104).

44. Hence, it would have been obvious to one of ordinary skill in the art to have included the technology taught by Shaw into the invention taught by Sit above, to prevent unauthorized access to the first controller from the network. In doing so would help ensure that the client complies with the security requirements, before allowing the client access to the network inside the inner firewall. Hence, to do so, would add an additional layer of security to the system (see paragraph 0026 of the Shaw reference).

45. Referring to claim 27, Sit teaches a third firewall between the second controller and the wide area network (column 2, lines 48-52).

Art Unit: 2432

46. Referring to claim 28, Sit teaches that the third firewall is configured to not permit inbound connection requests to the second controller (column 1, lines 65-67).

47. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sit as applied above, in view of Crichton and further in view of Johnson.

48. Sit discloses all the limitations of the parent claim, as well as exchanging device control messages between said first and second controller (column 4, lines 39-42). Sit does not explicitly disclose the first controller being behind the firewall and the second controller being outside the firewall, or using the first controller to control the devices using messages from the second controller.

49. However, Crichton discloses:

l. That the first and second network sides are separated by a firewall and the first controller is located behind said firewall and the second controller is located outside the firewall (Figure 4).

m. Using said first controller to control said devices (column 5, lines 39-40) using respectively corresponding signaling protocols in response to control messages from said second controller (column 5, lines 54-59).

50. Sit and Crichton are analogous art because they are from the same field of endeavor, communicating across a firewall. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Sit and Crichton before him or her, to modify the system of Sit to include the proxies of Crichton. The suggestion/motivation for doing so would have been to establish a secure communication link across multiple firewalls (column 2, lines 52-55).

Art Unit: 2432

51. Sit in view of Crichton does not explicitly disclose holding open a port, and using that port for communication. However, Johnson discloses holding a port open for data requests (page 4, paragraph 31). Sit in view of Crichton and Johnson are analogous art because they are from the same field of endeavor, remote communication. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Sit in view of Crichton and Johnson before him or her, to modify the communication system of Sit in view of Crichton to include holding the port open of Johnson. The suggestion/motivation for doing so would have been security is easily maintained (page 4, paragraph 31).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CORDELIA KANE whose telephone number is (571)272-7771. The examiner can normally be reached on Monday - Thursday 8:00 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2432

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. K./
Examiner, Art Unit 2432

/Gilberto Barron Jr/
Supervisory Patent Examiner, Art Unit 2432